THE CLAIMS

What is claimed is:

1. Implant for compensating for pathological changes in the spinal column or locomotor system comprising a varnish-like biodegradable polymer coating of a thickness of 100 μm or less.

2. Implant of claim 1 wherein the implant is a fracture-fixation or endoprosthetic device.

3. Implant of claim 2 wherein the fracture-fixation device is selected from the group consisting of a plate, screw, nail, pin, wire, thread, and cage.

4. Implant of claim 1 wherein the varnish-like coating has a thickness of 50 μm or less.

5. Implant of claim 4 wherein the varnish-like coating has a thickness of 10 to 30 μm.

6. Implant of claim 1 wherein the polymer has a glass transition temperature of more than 37°C (98.6°F).

7. Implant of claim 1 wherein the polymer has a mean molecular weight of 100 kDa or less.

8. Implant of claim 1 wherein the polymer is selected from the group consisting of poly-α hydroxy acids, polyglycols, polytyrosine carbonates, starch, gelatins, cellulose, and blends and interpolymers thereof.

9. Implant of claim 8 wherein the polymer includes poly-α hydroxy acids that are selected from the group consisting of polylactides, polyglycol acids, and interpolymers thereof.

10. Implant of claim 1 wherein the varnish-like coating contains a pharmaceutically active additive.

11. Implant of claim 10 wherein the pharmaceutically active additive includes an osteoinductive substance.

12. Implant of claim 11 wherein the osteoinductive substance contains a growth factor.

13. Implant of claim 12 wherein a growth-factor percentage of a total weight of the coating is 0.1 to 10% by weight.

14. Implant of claim 13 wherein the growth-factor percentage of the total weight is 0.5 to 8% by weight.

15. Implant of claim 14 wherein the growth-factor percentage of the total weight is 1 to 5% by weight.

16. Implant of claim 12 wherein the growth factor includes at least one of IGF, TGF, FGF, EGF, BMP, and PDGF.

17. Implant of claim 12 wherein the growth factor is IGF-I or TGF-β.

18. Implant of claim 12 wherein the growth factor is a mixture of IGF-I and TGF-β.

19. Implant of claim 18 wherein the coating contains about 5% by weight of IGF-I and 1% by weight of TGF-β1.

20. Implant of claim 1 wherein the coating contains at least two layers of the biodegradable polymer.

21. Method for making the implant of claim 1 comprising:

a. Preparing a dispersion of the biodegradable polymer in an organic solvent;

b. Applying the dispersion on the implant surface to be coated; and

c. Allowing the solvent to evaporate.

22. Method of claim 21 wherein the application and evaporation occur at a temperature between 0 and 30°C (32 - 86°F).

23. Method of claim 21 wherein the evaporation of the solvent occurs in a gaseous atmosphere substantially saturated with solvent vapor.

24. Method of claim 21 wherein the application of the dispersion and the evaporation of the solvent are repeated at least two times.

25. Method of claim 21 wherein the dispersion is a colloidal solution of the polymer in the solvent.

26. Method of claim 25 wherein the colloidal solution is produced by allowing a mixture of polymer and solvent to stand for 1 minute to 24 hours.

27. Method of claim 25 wherein the colloidal solution is filtered prior to its application.

28. Method of claim 27 wherein the colloidal solution is filtered through a micropore filter with a pore size of 0.45 μm or smaller.

29. Method of claim 21 wherein ethyl acetate or chloroform is used as the solvent.

30. Method of claim 21 wherein the dispersion contains 20 to 300 mg of polymer per ml of solvent.

31. Orthopaedic implant having a varnish-like biodegradable polymer coating of a thickness of 100 μm or less, the implant made by:

a. Preparing a dispersion of the biodegradable polymer in an organic solvent;
b. Applying the dispersion on the implant surface to be coated; and
c. Allowing the solvent to evaporate.